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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,137	03/01/2002	Yasushi Tanaka	HYAE:134	2656

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EXAMINER	
RAO, ANAND SHASHIKANT	
ART UNIT	PAPER NUMBER
2621	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/085,137	TANAKA ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *2/20/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *1-4,7,8,10 and 11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,6,9 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/3/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species IV as read on by claims 5-6, 9, and 12 as in the reply filed on is acknowledged. The traversal is on the ground(s) that since all Species are sufficiently related that a thorough and complete search for all Species could be made without serious burden (Response of 2/20/07: page 1, lines 10-21). This is not found persuasive because the placement of the EOB detector as in the figures of 7 and 10 (Species III and IV) connotes a separate status in the art to those particular embodiments even though they are classifiable together with the EOB detector as in figures 1 and 4 (Species I and II), and thus establishes serious burden on the Examiner. In particular, Species III and IV have their respective EOB detectors more proximal to the quantizers and ***even have feed back signals from the quantizers therein***, and as such would require a thorough and exhaustive analysis of classes 375/240.01-240.07 and of 382/233-240, 251-253, which is not the case with the embodiments of the Species I and II. See MPEP §808.02.

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. TClaim 12 is rejected under 35 U.S.C. 101 because they are directed towards nonstatutory subject matter.

A). The limitation "...An encoding program..." is a data structure. Data structures not claimed as embodied (or encoded with or embedded with) in a computer readable medium are descriptive material per se, and are not statutory, *Warmerdam, 33 F.3d at 1361, 31, USPQ2d at 1760).* Specifying the association in the manner listed above would sufficiently address the first condition. Similarly, computer programs claimed as computer listings, instructions, or codes are just the descriptions, expressions, of the program are not "physical things". They have neither computer components nor statutory processes, as they are not "acts" being performed. In contrast, a claimed "...computer readable medium encoded with a computer program..." is a computer element which defines structural and function interrelationships between the computer program and the rest of the computer, and is statutory, *Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.* Specifying the instructions as a "computer program" would sufficiently address the second condition, *Interim Guidelines, Annex IV (Section a).*

Corrections to the claims, and supporting specification are required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 5-6, 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Horikomi.

Horikomi discloses an encoding circuit that includes a frequency converter for frequency-converting data of a processing target block into frequency components, a quantizer for quantizing the frequency components, and an encoder for variable length coding the quantized frequency components in a predetermined scanning order (Horikomi: figure 1), comprising: an EOB detector for detecting a position of a rearmost non-zero quantized frequency component in the processing target block in the predetermined scanning order (Horikomi: figure 12A), and outputting the detected position as a control signal to the quantizer and the encoder (Horikomi: column 12, lines 50-65); said quantizer quantizing the frequency components up to the position in the predetermined scanning order (Horikomi: column 11, lines 35-45), indicated by the control

signal, and pausing the quantization process ((Horikomi: column 14, lines 25-51); and said encoder variable length coding the quantized frequency components up to the position in the predetermined scanning order, indicated by the control signal, adding an EOB code that indicates an end of effective components, and pausing the variable length coding process (Horikomi: column 14, lines 50-67; column 15, lines 1-20), as in claim 5.

Regarding claim 6, Horikomi discloses wherein the EOB detector is provided between the frequency converter and the quantizer, and said EOB detector includes a memory for temporarily retaining the frequency components of the processing target block from the frequency converter, and outputting the retained frequency components in the predetermined scanning order (Horikomi: column 12, lines 30-40); a counter for detecting a position of the frequency component that is inputted from the memory in the predetermined scanning order (Horikomi: column 14, lines 20-40); a first comparator for comparing the frequency component, with a quantization value as a divisor for dividing the frequency component in the quantizer (Horikomi: column 17, lines 60-67; a buffer for storing values of the frequency components (Horikomi: column 17, liens 30-40); and a register for retaining a position of a non-zero quantized frequency component in the predetermined scanning order on the basis of a result of the first comparator (Horikomi: column 15, lines 55-67), as in the claim.

Horikomi discloses an encoding method (Horikomi: figure 3) comprising: a frequency conversion step of frequency-converting data of a processing target block into frequency components (Horikomi: column 11, lines 35-45); an EOB detection step of comparing the frequency component with a quantization value as a divisor for dividing the frequency components in a quantization process (Horikomi: column 12, lines 30-45), and detecting a

position of a rearmost non-zero quantized frequency component in the processing target block in a predetermined scanning order (Horikomi: column 14, lines 25-40); a quantization step of quantizing the frequency components up to the position in the predetermined order, detected in the EOB detection step (Horikomi: column 12, lines 30-45), and pausing the quantization process (Horikomi: column 12, lines 20-25); and an encoding step of variable length coding the quantized frequency components up to the position in the predetermined scanning order (Horikomi: column 14, lines 50-60), adding an EOB code that indicates an end of effective components (Horikomi: column 13, lines 55-67), and pausing the variable length coding process (Horikomi: column 14, lines 60-67; column 15, lines 1-10), as in claim 9.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horikomi in view of Kobayashi.

Horikomi discloses an encoding method (Horikomi: figure 3) comprising: a frequency conversion step of frequency-converting data of a processing target block into frequency components (Horikomi: column 11, lines 35-45); an EOB detection step of comparing the frequency component with a quantization value as a divisor for dividing the frequency components in a quantization process (Horikomi: column 12, lines 30-45), and detecting a

position of a rearmost non-zero quantized frequency component in the processing target block in a predetermined scanning order (Horikomi: column 14, lines 25-40); a quantization step of quantizing the frequency components up to the position in the predetermined order, detected in the EOB detection step (Horikomi: column 12, lines 30-45), and pausing the quantization process (Horikomi: column 12, lines 20-25); and an encoding step of variable length coding the quantized frequency components up to the position in the predetermined scanning order (Horikomi: column 14, lines 50-60), adding an EOB code that indicates an end of effective components (Horikomi: column 13, lines 55-67), and pausing the variable length coding process (Horikomi: column 14, lines 60-67; column 15, lines 1-10), as in claim 12. However, Horikomi fails to disclose the implementation of the method as a computer program for making a computer implement the method as in the claim. Kobayashi discloses an image encoding method (Kobayashi: figures 1-6) including EOB detection/processing (Kobayashi: column 12, lines 35-50) as implemented on as a computer program for making a computer implement the method in order to have (Kobayashi: column 24, lines 35-45) in order to have the method implemented across a distributed network (Kobayashi: column 26, lines 50-52). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to incorporate the computer program implementation of Kobayashi with the Horikomi method in order to have the Horikomi method implemented across distributed networks. The Horikomi method, now implemented as a computer program as shown by Kobayashi, has all of the features of claim 12.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fujiwara discloses a decoding circuit for run-length codes. Rhee discloses a method and apparatus for decoding images having formats for a digital camcorder.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
May 7, 2007